Trend Study 28-17-03

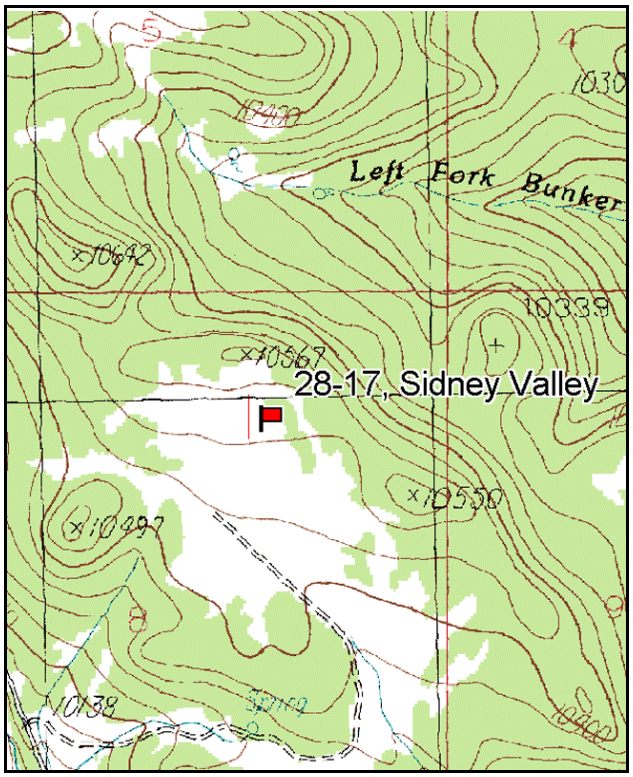
Study site name: Sidney Valley . Vegetation type: Perennial Grass .

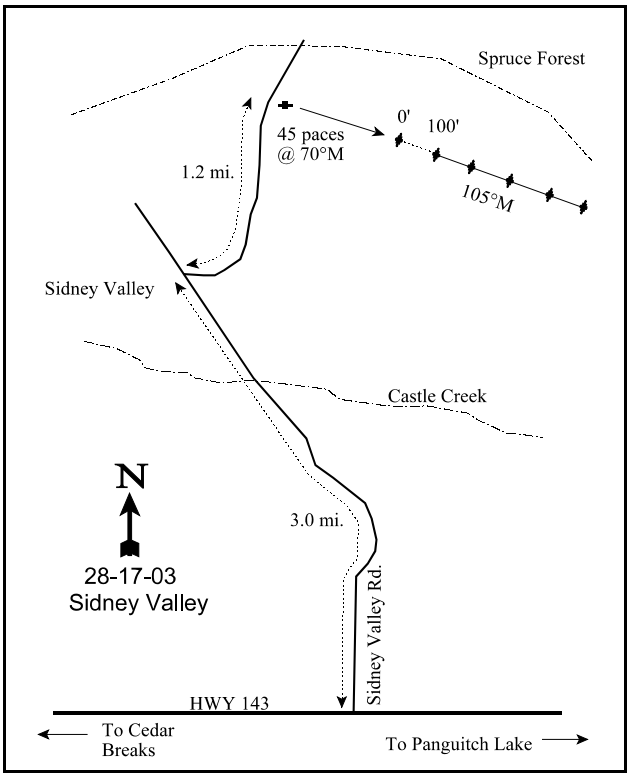
Compass bearing: frequency baseline 105 degrees magnetic.

Frequency belt placement: line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95ft).

LOCATION DESCRIPTION

Start at the junction of Highway 143 and the Sidney Valley Road. This junction is between Cedar Breaks and Panguitch Lake. Drive north on Sidney Valley Road for 3.0 miles to a fork on the right (east) side of the road (Castle Creek will be crossed). Take the right fork for 1.2 miles to the witness post on the right (east) side of the road. The 0-foot stake is 54 paces at 70 degrees magnetic from the witness post. The 0-foot stake is marked with browse tag #164.





Map Name: Brian Head

Diagrammatic Sketch

Township 36S , Range 8W , Section 8

GPS: NAD 27, UTM 12S 4179243 N, 370006 E

DISCUSSION

Sidney Valley - Trend Study No. 28-17

This is a new study established in 2003 to monitor elk summer range. Sidney Valley was chosen by the local biologist as elk use in the area has been increasing the past several years. The study site samples a dry meadow type at an elevation of 10,500 feet. The site slopes to the south at 8%. Pellet group transect data taken in 2003 estimated 97 elk and 27 deer days use/acre (240 edu/ha and 66 ddu/ha) on the meadow. Use was primarily from late spring and summer. This area is also apparently grazed by sheep in some years as a mineral lick is found near the site.

Soils on the site are loam in texture and moderately acidic in pH (5.6). These are deep mountain soils derived from igneous parent material. Effective rooting depth was measured at 18 inches, and soil temperature averaged just under 55°F in 2003. Rock and pavement covered a moderate portion of the soil surface at an estimated 20% in 2003. Erosion is low for the most part, with the majority of the soil disturbance coming from gopher activity. Perennial herbaceous vegetation and litter cover are high and adequately protect the surface. Bare ground was moderate in 2003 at 19%. An erosion condition class assessment rated soils as stable in 2003.

There were no browse species sampled on the site, but as this is high elevation summer range, browse is not of great importance. The herbaceous understory is abundant, but dominated by only a few species. The composition is poor with a high proportion of increasers present. Subalpine needlegrass, mountain muhly, and Letterman needlegrass are the predominant grass species while dandelion and yarrow dominate the forb component. These 5 species combined to provide 94% of the total vegetation cover on the site in 2003. The predominant grasses have fair to good forage value for big game and livestock, but become less palatable at maturity. Dandelion has fair to good forage value for elk and livestock, especially during spring green-up. Mormon crickets were surprisingly abundant on the site in 2003, but had not done a lot of damage to the vegetation on the site at least at the time of sampling.

2003 APPARENT TREND ASSESSMENT

Soils appear stable. Vegetation and litter cover are abundant and erosion is low. Most of the soil disturbance comes from gopher activity. The vegetative community is absent of browse, but as this is a high elevation summer range, browse is of minimal importance to big game on this site. The herbaceous component is very abundant overall, but composition is poor with a lot of increasers present. The composition indicates past heavy grazing. The predominant species have fair to good forage value for big game and livestock, especially during green-up when plants are young and succulent. Major changes in composition are unlikely and may only occur with changes in grazing management.

HERBACEOUS TRENDS --
Management unit 28 , Study no: 17

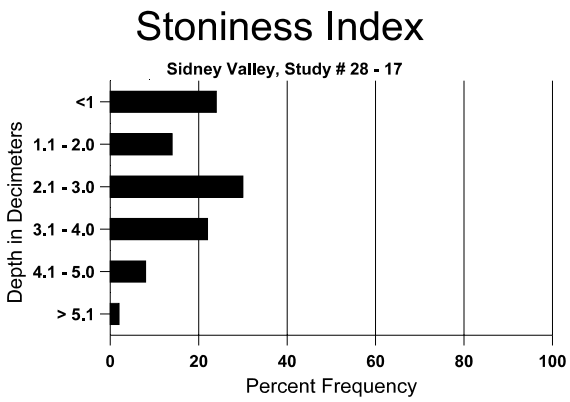
Type	Species	Nested Frequency '03	Average Cover % '03
G	Agropyron trachycaulum	54	.75
G	Carex spp.	13	.22
G	Festuca ovina	11	.15
G	Muhlenbergia montana	100	6.28
G	Poa glauca	10	.36
G	Sitanion hystrix	5	.10
G	Stipa columbiana	272	15.90
G	Stipa lettermani	167	4.22
Total for Annual Grasses		0	0
Total for Perennial Grasses		632	28.01
Total for Grasses		632	28.01
F	Achillea millefolium	218	3.67
F	Agoseris aurantiaca	6	.07
F	Androsace septentrionalis (a)	1	.00
F	Arabis spp.	6	.01
F	Aster chilensis	16	.19
F	Erigeron spp.	19	.21
F	Lepidium densiflorum (a)	28	.16
F	Potentilla spp.	2	.00
F	Senecio integerrimus	19	.10
F	Taraxacum officinale	245	5.73
F	Tragopogon dubius	1	.03
F	Trifolium spp.	11	.07
Total for Annual Forbs		29	0.16
Total for Perennial Forbs		543	10.10
Total for Forbs		572	10.27

BASIC COVER --
Management unit 28 , Study no: 17

Cover Type	Average Cover % '03
Vegetation	41.18
Rock	6.98
Pavement	13.15
Litter	30.29
Bare Ground	18.93

SOIL ANALYSIS DATA --
Management unit 28, Study no: 17, Study Name: Sidney Valley

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	PPM P	PPM K	ds/m
17.9	54.8 (18.1)	5.6	44.6	37.2	18.2	3.3	25.4	752.0	0.5



PELLET GROUP DATA --
Management unit 28 , Study no: 17

Type	Quadrat Frequency '03
Rabbit	5
Elk	28
Deer	10
Cattle	3

Days use per acre (ha) '03
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97 (240)
27 (66)
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